BW Technologies GasAlertMax 4 Gas Detector

NORMAL OPERATION:

1. Insert Battery.
2. **Turn On** the instrument in fresh air (i.e., not near vehicle or building exhaust): Press the Green On/Off button.
3. The instrument will go into a **Self-Test** mode (see attached for the following):
   a. All of the display's elements should appear on the display screen.
   b. The detector should beep and flash.
   c. The display screen's backlight should come on briefly.
   d. The Low and High Alarm setpoints for each gas are tested.
   e. The oxygen sensor is automatically calibrated.

   NOTE: If the Self-Test in NOT successful, the unit will not go into normal operation. Call Safety Support for maintenance.
4. **Ready to Use**:
   a. If the Self-Test is successful, the instrument will begin normal operation. You should see all four of the gas readings on the display screen.
   b. Keep the instrument turned on the entire time the Entrant is in the confined space.

5. Take **Atmospheric Readings**:
   a. If possible, place the sampling end of the pump hose through a crack **at** the **entrance** to the confined space so as to get as true of a reading as possible. Opening the cover may dilute the internal atmosphere to the point where an alarm will not sound until the Entrant is already inside the confined space.

   NOTE: It will take about 1 second for every 2 feet of hose length to get an accurate reading. Example: If the hose is 10 feet long, leave the hose in place for at least 5 seconds to get a good atmospheric reading.
   b. Drop the hose about **half way down** to take another reading.
   c. Drop the hose to its **full length** and take another reading.
   d. If the depth of the confined space is greater than the hose length, the Entrant will have to take the detector inside the confined space to take further readings.

   NOTE: Some gases are heavier than air so will sink to the bottom of the confined space while other gases are lighter than air so will rise to the top. Atmospheric readings are necessary at different depths to try to detect gases wherever they may have become trapped.
6. To **Turn Off** the instrument, Press and Hold the Green On/Off button for 5 seconds (the instrument will beep 4 times then turn Off). This prevents accidentally turning off of the instrument.

ALARMS:

1. Procedure - Anytime the instrument goes into alarm while an Entrant is in a confined space:
   a. The Entrant is to immediately evacuate …
   b. and/or the Attendant is to direct the Entrant to immediately evacuate …
   c. and the Entrant is to comply without question. Questions can be asked when the Entrant is safely outside.
2. Alarms will be **flashing lights** and an **audible** (95 db) **tone** to indicate (see attached):
   a. High and/or Low sensor readings may be indicated for one or more ambient gases outside of safe levels.
   b. Low Battery - Loss of power is imminent.
   c. Pump Blocked - due to an obstruction or the pump has failed.
3. The alarm is latched meaning that the instrument will stay in alarm (lights flash and audible tone) until the user tells it to stop: Press the Blue OK button.

   NOTE: This is to prevent confusion and to ensure there was an alarm situation.
   Example: If the alarm were not latched, an alarm would sound when an unsafe gas reading was detected but would also stop alarming as soon as the gas reading returned to normal. An evacuation would still be required and the reason for the alarm would have to be determined so appropriate protective measures could be provided.

SENSOR FAILURE - Procedure:

1. If you are inside a confined space, immediately evacuate.
2. Read the display screen to determine what condition exists.
   NOTE: The display will indicate which sensor has failed during the Self-test or the defective sensor will not be displayed with the other sensor readings.
3. Call Safety Support for maintenance.
   WARNING: Do not use this detector until after maintenance is performed and it is cleared for use. Instead, obtain the other detector to continue your confined space entry.

HIGH or LOW ALARM - Procedure:

1. Immediately evacuate the confined space.
2. Read the display screen to determine what condition exists.
3. Notify your supervisor of the alarm condition so that a plan of action can be determined.
4. Call Safety Support as required for consultation.

LOW BATTERY ALARM - Procedure:

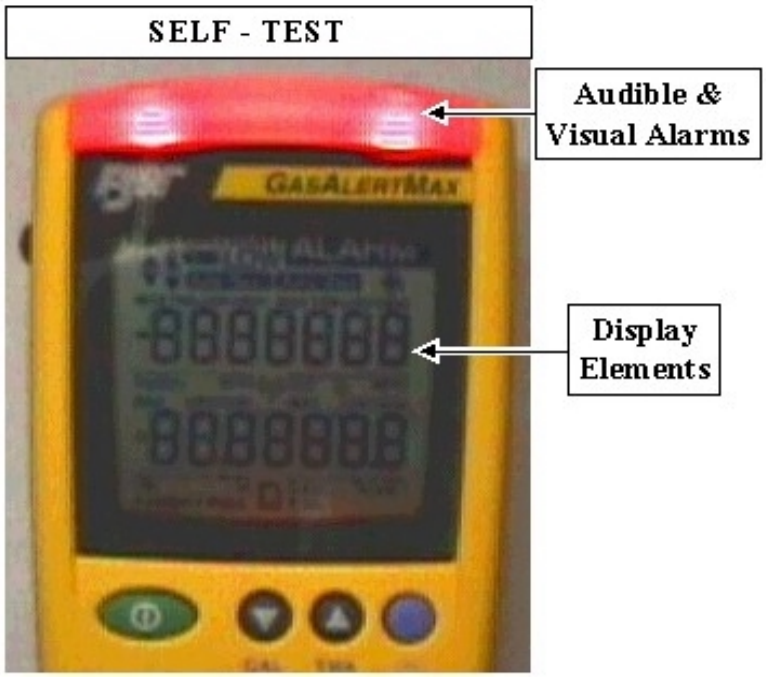
1. Immediately evacuate the confined space.
2. You may have several minutes of battery power remaining and can leave the detector on until outside the confined space or it turns itself Off, whichever occurs first.
3. Turn Off the detector (outside of the confined space).
4. Eject the battery: Press the Black Release button.
5. Insert the spent battery into the recharging unit.
6. Insert a charged battery into the detector.
7. The detector is once again ready for Normal Operation and re-entry to the confined space is authorized.

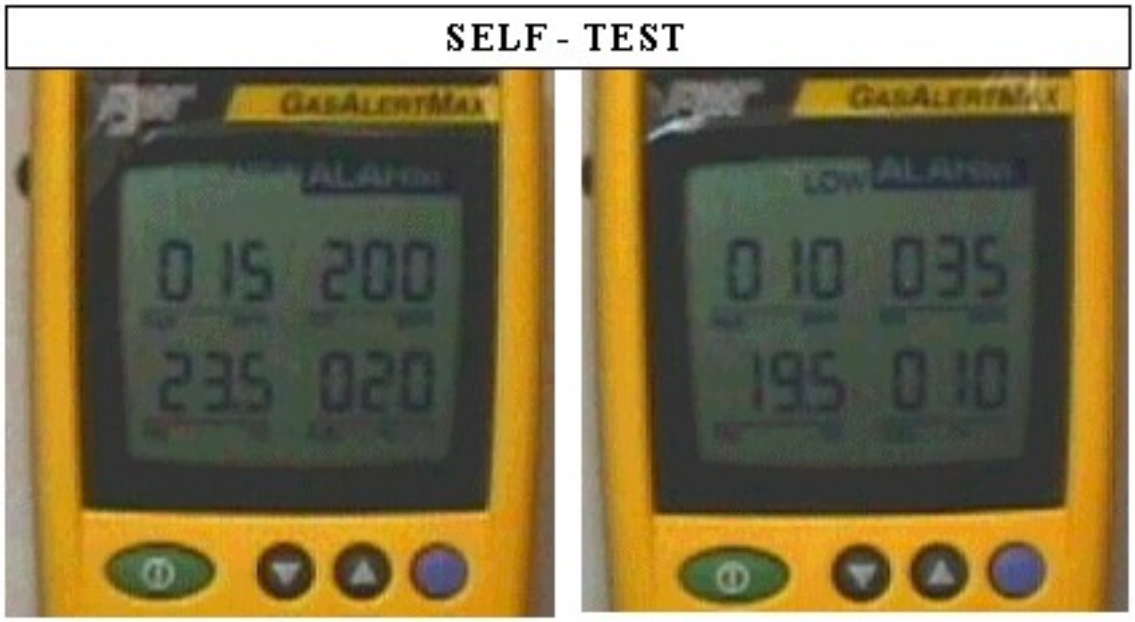
PUMP ALARM - Procedure:

1. Immediately evacuate the confined space.
2. Immediately turn Off the detector.
3. Clear the pump inlet and hose (of water, dirt or debris).
4. Turn On the detector again.
5. If the detector returns to Normal Operations, re-entry to the confined space is authorized.
6. If the pump goes into alarm a second time, turn off the detector immediately and call Safety Support.
   WARNING: Do not use this detector until after maintenance is performed and it is cleared for use. Instead, obtain the other detector to continue your confined space entry.

CHARGING BATTERIES - Procedure:

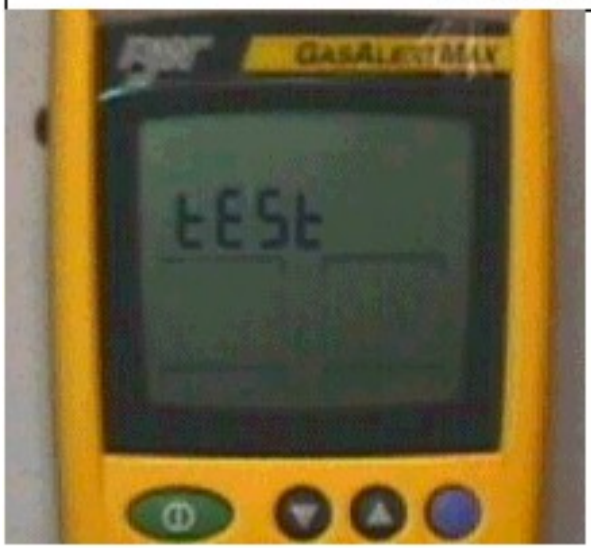
1. Plug the charging unit into a household receptacle.
2. Insert a battery into the charging slot (silver end down).
   a. Two batteries may be charged simultaneously.
   b. It takes about 9 hours to fully charge a battery.
   c. Batteries may remain in the charger indefinitely.
   d. Each NiMh battery should provide 9-12 hours of use.





High Alarm **Low Alarm**

SELF - TEST



Sensor Test

Automatic Calibration of Oxygen

Normal Operation

Sensor Readings in Normal Range

ALARMS

Low Battery

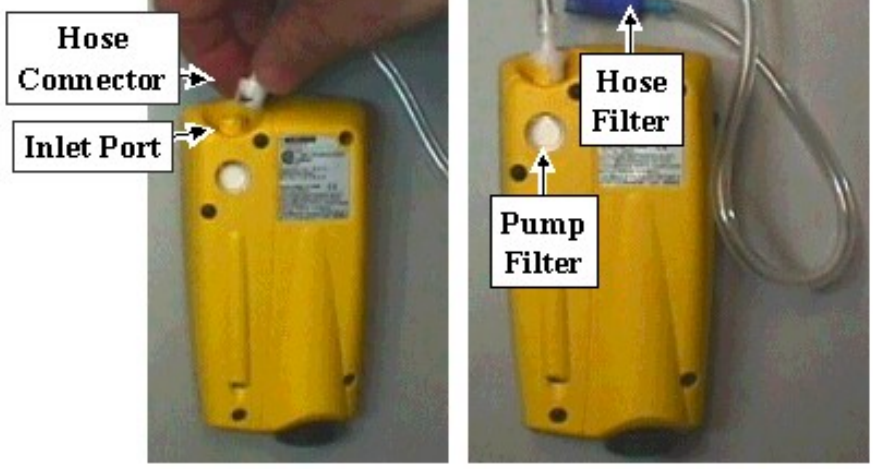
Pump Blocked or Failed

ALARMS

Sensor Alarm (Oxygen Low)

Latched Alarm (Push OK)

REMOTE SAMPLING



Attach Hose to Inlet & Lock (1/4 Turn)

10' Sampling Hose & Filters

BATTERY

Change Battery (Press Release)

Battery Charger